

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 88-081

SITE CLEANUP REQUIREMENTS FOR:

DATA GENERAL CORPORATION
433 NORTH MATHILDA AVENUE FACILITY
SUNNYVALE, SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Data General Corporation (hereinafter called the discharger) owns and operates a semiconductor design, research and development facility located at 433 North Mathilda Avenue, Sunnyvale. The facility was constructed in 1972 and was initially used by the discharger for the production of numerous semiconductor products.
2. Subsurface investigations reveal that the soil and groundwater beneath the site is contaminated with trichloroethylene (TCE), trans-1,2-dichloroethylene (TDCE), ethyl benzene, xylenes, and toluene. These compounds have been detected in the groundwater at a total concentration as high as 875 parts per billion (ppb). It is believed that the source of these contaminants were spills from a vaulted tank complex and/or the trench distribution system. Groundwater beneath the site has also been polluted by other organic solvents such as tetrahydrofuran, methylene chloride, 1,1,1-trichloroethane (TCA), and 1,1-dichloroethane (DCA) which are migrating onto the property from up-gradient sources.
3. Groundwater monitoring data indicates that the plume extends vertically to a depth of 36 feet and horizontally a distance of at least 480 feet from the source area. Further studies are required to define the vertical and lateral extent of pollution.
4. Remedial activities at this site have included the removal of an underground 1,500 gallon waste solvent storage tank, an acid neutralization system comprised of two tanks, the vault which contained the three tanks, and contaminated soils. The tanks were installed in 1972, removed from service in 1978, and removed from the site along with contaminated soils during January to April 1987.
5. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan contains water quality

objectives and beneficial uses for South San Francisco Bay and contiguous surface and groundwaters.

6. The existing and potential beneficial uses of the groundwater underlying and adjacent to the facility include:
 - a. Industrial process water supply
 - b. Industrial service water supply
 - c. Municipal and Domestic water supply
 - d. Agricultural water supply
7. The discharger has caused or permitted, and threatens to cause or permit waste to be discharged or deposited where it is or probably will be discharged to waters of the State and creates or threatens to create a condition of pollution or nuisance.
8. This action is an order to enforce the laws and regulations administered by the Board. This action is categorically exempt from the provisions of the California Environmental Quality Act, CEQA, pursuant to Section 15321 of the Resources Agency Guidelines.
9. On-site and off-site interim containment and cleanup measures need to be implemented to alleviate the threat to the environment posed by the continued migration of the groundwater plume of organic solvents and to provide a substantive technical basis for designing and evaluating the effectiveness of final cleanup alternatives.
10. The Board has notified the discharger and interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharger and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.
11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the discharger shall cleanup and abate the effects described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality or adversely affect the beneficial uses of the waters of the State is prohibited.

2. Further significant migration of pollutants through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of pollutants are prohibited.

B. SPECIFICATIONS

1. The storage, handling, treatment or disposal of polluted soil or groundwater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The discharger shall conduct monitoring activities as needed to define the current local hydrogeologic conditions, and the lateral and vertical extent of soil and groundwater pollution. Should monitoring results show evidence of plume migration, additional plume characterization may be required.

C. PROVISIONS

1. The discharger shall submit to the Board acceptable monitoring program reports containing results of work performed according to a program prescribed by the Board's Executive Officer.
2. The discharger shall comply with Prohibitions A.1., A.2., and A.3., and Specifications B.1. and B.2. above, in accordance with the following time schedule and tasks:

COMPLETION DATE/TASK:

- a. (1) COMPLETION DATE: June 15, 1988

TASK: GROUNDWATER POLLUTION CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer containing a proposal to define the horizontal and vertical extent of groundwater pollution.

- (2) COMPLETION DATE: September 15, 1988

TASK: COMPLETION OF GROUNDWATER POLLUTION CHARACTERIZATION: Submit a technical report acceptable to the Executive Officer which defines the horizontal and vertical extent of groundwater pollution.

- b. (1) COMPLETION DATE: July 15, 1988

TASK: ON-SITE INTERIM REMEDIAL ACTIONS FOR GROUNDWATER: Submit a technical report acceptable to the Executive Officer which contains an evaluation of on-site interim remedial alternatives, a recommended plan for on-site interim remediation, an operation and maintenance program that will ensure continuous operation, and an implementation time schedule. This report shall evaluate alternative hydraulic control systems to contain and to initiate cleanup of polluted groundwater; and include a completed NPDES application to discharge to surface waters, if such discharge is an element of the plan.

- (2) COMPLETION DATE: December 15, 1988

TASK: COMPLETION OF ON-SITE INTERIM REMEDIAL ACTIONS FOR GROUNDWATER: Submit a technical report acceptable to the Executive Officer which documents the commencement of the hydraulic control system necessary to contain and treat the contaminated groundwater beneath the site.

- c. (1) COMPLETION DATE: April 15, 1989

TASKS:

- (a) **EVALUATE INTERIM ON-SITE HYDRAULIC CONTAINMENT:** Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim on-site hydraulic containment system. Such an evaluation shall include, but need not be limited to, an estimation of the flow capture zone of the extraction wells, establishment of the cones of depression by field measurements, and presentation of chemical monitoring data.
- (b) **MODIFICATION TO INTERIM ACTIONS:** Specific modifications to the system and an implementation time schedule shall be proposed in the event that the hydraulic control system is demonstrated not to be effective in containing and removing the on-site pollutants.

- (2) COMPLETION DATE: August 15, 1989

TASK: COMPLETION OF MODIFICATIONS TO INTERIM ACTIONS: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.c.(1)(b).

- d. (1) COMPLETION DATE: August 15, 1989

TASK: OFF-SITE INTERIM REMEDIAL ACTIONS: Submit a technical report acceptable to the Executive Officer which contains an evaluation of off-site interim remedial alternatives, a recommended plan for off-site interim remediation, an operation and maintenance program that will ensure continuous operation, and an implementation time schedule. This report shall evaluate alternative hydraulic control systems to contain and to initiate cleanup of polluted groundwater; and include a completed NPDES application to discharge to surface waters, if such discharge is an element of the plan.

- (2) COMPLETION DATE: February 15, 1990

TASK: COMPLETION OF OFF-SITE INTERIM REMEDIAL ACTIONS: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.d.(1).

- e. (1) COMPLETION DATE: June 15, 1990

TASKS:

- (a) EVALUATE INTERIM OFF-SITE HYDRAULIC CONTAINMENT: Submit a technical report acceptable to the Executive Officer which evaluates the effectiveness of the interim off-site hydraulic containment system. Such an evaluation shall include, but need not be limited to, an estimation of the flow capture zone of the extraction wells, establishment of the cones of depression by field measurements, and presentation of chemical monitoring data.

- (b) **MODIFICATION TO INTERIM ACTIONS:** Specific modifications to the system and an implementation time schedule shall be proposed in the event that the hydraulic control system is demonstrated not to be effective in containing and removing the off-site pollutants.

(2) **COMPLETION DATE:** October 15, 1990

TASK: COMPLETION OF MODIFICATIONS TO INTERIM ACTIONS: Submit a technical report acceptable to the Executive Officer documenting completion of the necessary tasks identified in the technical report submitted for Task 2.e.(1)(b).

f. **COMPLETION DATE:** June 15, 1991

TASK: PROPOSED FINAL CLEANUP OBJECTIVES AND ACTIONS: Submit a technical report acceptable to the Executive Officer containing the results of the remedial investigation; an evaluation of the installed interim remedial measures; a feasibility study evaluating alternative final remedial measures; the recommended measures necessary to achieve final cleanup objectives; and the tasks and time schedule necessary to implement the recommended final remedial measures.

3. The submittal of technical reports evaluating interim and final remedial measures will include a projection of the cost, effectiveness, benefits, and impact on public health, welfare, and environment of each alternative measure. The remedial investigation and feasibility study shall consider guidance provided by:

- a. Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300);
- b. Superfund Amendments and Reauthorization Act of 1986;
- c. Section 25356.1(c) of the California Health and Safety Code;
- d. CERCLA/SARA guidance documents with reference to Remedial Investigations and Feasibility Studies;

- e. State Water Resources Control Board's Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California".
- 4. If the discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the discharger shall promptly notify the Executive Officer. In the event of such delays, the Board may consider modification of the task completion dates established in this Order.
- 5. Technical reports on compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted monthly to the Board commencing on June 15, 1988. Each monthly report shall consist of a letter report that, (1) summarizes work completed since submittal of the previous report, and work projected to be completed by the time of the next report, (2) identifies any obstacles which may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles, and (3) includes, in the event of non-compliance with Provision C.2. or any other Specification or Provision of this Order, written notification which clarifies the reasons for non-compliance and which proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non-compliance on achieving compliance with the remaining requirements of this Order.
- 6. On a quarterly basis, commencing with the monthly report due August 15, 1988, the monthly technical report shall include, but need not be limited to: updated water table and piezometric surface contour maps; pollution concentration contour maps for all affected water bearing zones; cross-sectional geological maps describing the hydrogeological setting of the site; and appropriately scaled and detailed base maps showing the location of all monitoring wells and extraction wells, and identifying adjacent facilities and structures.
- 7. All hydrogeological plans, specifications, reports, and documents shall be signed by or stamped with the seal of a registered geologist, engineering geologist or professional engineer.

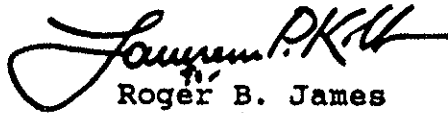
8. All samples shall be analyzed by State certified laboratories using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.
9. The discharger shall maintain in good working order, and operate, as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.
10. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, shall be provided to the following agencies:
 - a. Santa Clara Valley Water District
 - b. Santa Clara County Health Department
 - c. City of Sunnyvale
 - d. State Department of Health Services/TSCD

The Executive Officer may additionally require copies of correspondence, reports and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order to be provided to the U.S. Environmental Protection Agency, Region IX, and to a local repository for public use.

11. The discharger shall permit the Board or its authorized representative, in accordance with Section 13267(c) of the California Water Code:
 - a. Entry upon premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
 - b. Access to copy any records required to be kept under the terms and conditions of this Order.
 - c. Inspection of any monitoring equipment or methodology implemented in response to this Order.
 - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
12. The discharger shall file a report on any changes in site occupancy and ownership associated with the facility described in this Order.

13. If any hazardous substance is discharged in or on any waters of the state, or discharged and deposited where it is, or probably will be discharged in or on any waters of the state, the discharger shall report such discharge to this Regional Board, at (415) 464-1255 on weekdays during office hours from 8 a.m. to 5 p.m., or to the Office of Emergency Services at (800) 852-7550 during non-business hours. A written report shall be filed with the Regional Board within five (5) working days and shall contain information relative to: the nature of waste or pollutant; quantity involved; duration of incident; cause of spill; Spill Prevention, Control, and Countermeasure Plan (SPCC) in effect, if any; estimated size of affected area; nature of effects; corrective measures that have been taken or planned; and a schedule of these activities, and persons/agencies notified.
14. The Board will review this Order periodically and may revise the requirements when necessary.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 18, 1988.


Roger B. James
Executive Officer